Process, service computer, switching centre,
terminals and program modules for handling incoming
telephone calls during an online data-network session
blocking a subscriber line

Claims

1.   A process for handling incoming telephone calls for a
subscriber line (VA1) of a telecommunications network
(PSTN) during an online data-network session blocking the
subscriber line (VA1), involving the following steps:

5   -   a terminal (TERA) sets up a connection (VA11,
VA1, VPOP1) to an access device (POP) of an online data
network (INT) via the subscriber line (VA1),
          -    the access device (POP) sends current access data
to the terminal (TERA),

10   **characterised by** the following further steps:
          -    the terminal (TERA) signals the current access
data to a service computer (SCP, GPTM) of the
telecommunications network,
          -    a switching centre (SW1) of the

15   telecommunications network signals to the service computer
(SCP, GPTM) the fact that an incoming call destined for
the subscriber line (VA1) is waiting and
          -    the service computer (SCP, GPTM) supplies at
least one predetermined service for the purpose of

20   processing the incoming call.

2   Process according to Claim 1, characterised in that by
way of predetermined service the service computer (SCP,
GPTM) sends a message to the terminal (TERA) in which

25   attention is drawn to the incoming call.

3.   Process according to Claim 1, characterised in that by
way of predetermined service the service computer (SCP,
GPTM) forwards the incoming call to an alternative

30   destination (TELA2).

4. Process according to Claim 1, characterised in that by way of predetermined service the service computer (SCP, GPTM) forwards the incoming call to the terminal (TERA) via the online data network.

5. Process according to Claim 1, characterised in that by way of predetermined service the service computer (SCP, GPTM) instructs the switching centre (SW1) or the terminal (TERA) to break off or to interrupt the online data-network session blocking the subscriber line (VA1) and in that the switching centre (SW1) signals the incoming call on the subscriber line (VA1).

6. Process according to Claim 1, characterised in that by way of predetermined service the service computer (SCP, GPTM) sends a selection menu to the terminal (TERA), by means of which a selection of possible follow-up services for the purpose of processing the incoming call is offered, in that the terminal (TERA) ascertains a selection that has been made by an operator in the selection menu, in that the terminal (TERA) sends the selection to the service computer (SCP, GPTM) and in that the service computer (SCP, GPTM) supplies the follow-up service defined in the selection.

7. Process according to Claim 1, characterised in that the service computer (SCP, GPTM) sends an instruction to the switching centre (SW1) to signal to the service computer (SCP, GPTM) the fact that an incoming call destined for the subscriber line (VA1) is waiting if the terminal (TERA) has set up the connection (VA11, VA1, VPOP) blocking the subscriber line (VA1) to the access device (POP) of the online data network (INT) via the subscriber line (VA1).

8.   Process according to Claim 1, characterised in that the switching centre (SW1) signals to the service computer (SCP, GPTM) a clear-down of the connection (VA11, VA1, VPOP) blocking the subscriber line (VA1) of the terminal (TERA) to the access device (POP) of the online data network (INT) via the subscriber line (VA1).

9.   Process according to Claim 1, characterised in that when a call comes in that is directed to a special call number which has been set up in the switching centre (SW1) the switching centre (SW1) signals to the service computer (SCP, GPTM) the fact that an incoming call destined for the subscriber line (VA1) is waiting.

10. A service computer (SCP, GPTM) for handling incoming telephone calls for a subscriber line (VA1) of a telecommunications network (PSTN) during an online data-network session of a terminal (TERA) blocking the subscriber line (VA1), **characterised in that** the service computer (SCP, GPTM) exhibits receiving means (TRSC, CPUSC, CPUGP, IGP) which are configured in such a way that the service computer (SCP, GPTM) can receive access data sent from the terminal (TERA) which the terminal (TERA) has received from an access device (POP) of an online data network (INT) in the course of the setting-up of a connection (VA11, VA1, VPOP1) to the online data network (INT) via the subscriber line (VA1), in that the service computer (SCP, GPTM) exhibits memory means (MEMSC, MEMGP) which are configured in such a way that the service computer (SCP, GPTM) can store the access data, in that the receiving means (TRSC, CPUSC, TRGP, CPUGP) are moreover configured in such a way that the service computer (SCP, GPTM) can receive a message from a switching centre (SW1) of the telecommunications network, in which the switching centre (SW1) signals an incoming call destined for the subscriber line (VA1) to the service

computer (SCP, GPTM), and in that the service computer
(SCP, GPTM) exhibits service-supplying means (TRSC, MEMSC,
CPUSC, TRGP, MEMGP, CPUGP) which are configured in such a
way that the service computer (SCP, GPTM) can supply at
5   least one predetermined service for the purpose of
processing the incoming call with the aid of the access
data.

    11. A switching centre (SW1) for handling incoming
10   telephone calls for a subscriber line (VA1) of a
telecommunications network (PSTN) during an online data-
network session of a terminal (TERA) blocking the
subscriber line (VA1), said switching centre (SW1)
exhibiting receiving means (TRSW) which are configured in
15   such a way that the switching centre (SW1) can receive and
hold an incoming call destined for the subscriber line
(VA1) while the subscriber line (VA1) is blocked by an
online data-network session of the terminal (TERA), and
said switching device (SW1) exhibiting recognition means
20   (TRSW, CPUSW) which are configured in such a way that the
switching centre (SW1) can recognise that the terminal
(TERA) has set up a connection (VA11, VA1, VPOP) blocking
the subscriber line (VA1), **characterised in that** the
switching centre (SW1) exhibits sending means (TRSW,
25   CPUSW) which are configured in such a way that the
switching centre can send a message to a service computer
(SCP, GPTM) if an incoming call destined for the
subscriber line (VA1) is waiting while the subscriber line
(VA1) is blocked by an online data-network session of the
30   terminal (TERA).

    12. A terminal (TERA) for handling incoming telephone
calls for a subscriber line (VA1) of a telecommunications
network (PSTN) during an online data-network session of
35   the terminal (TERA) blocking the subscriber line (VA1),
characterised in that the terminal (TERA) exhibits

receiving means (TRTER) which are configured in such a way
that the terminal (TERA) can receive current access data
from an access device (POP) of an online data network
(INT) which the access device (POP) sends to the terminal
5 (TERA) in the course of the setting-up of a connection
(VA11, VA1, VPOP) to the online data network (INT) via the
subscriber line (VA1), and in that the terminal (TERA)
exhibits sending means (TRTER) which are configured in
such a way that the terminal (TERA) can send the current
10 access data to a service computer (SCP, GPTM) of the
telecommunications network, which with the aid of the
access data can supply at least one predetermined service
for the purpose of processing an incoming call.

15 13. A terminal (TERA) for handling incoming telephone
calls for a subscriber line (VA1) of a telecommunications
network (PSTN) during an online data-network session of
the terminal (TERA) blocking the subscriber line (VA1),
characterised in that the terminal (TERA) exhibits
20 receiving means (TRTER) which are configured in such a way
that the terminal (TERA) can receive instructions from a
service computer (SCP, GPTM) which, with a view to
supplying at least one predetermined service for the
purpose of processing the incoming call, the service
25 computer (SCP, GPTM) sends off to the terminal (TERA) with
the aid of access data which the service computer (SCP,
GPTM) has obtained from the terminal (TERA) after a
connection (VA11, VA1, VPOP) from the terminal (TERA) to
the online data network (INT) has been set up via the
30 subscriber line (VA1), and in that the terminal (TERA)
exhibits executing means (CPUTR, MEMTR) which are
configured in such a way that the terminal (TERA) can
execute the instructions.

35 14. An access-data-sending program module for a terminal
(TERA) for handling incoming telephone calls for a

subscriber line (VA1) of a telecommunications network
(PSTN) during an online data-network session of the
terminal (TERA) blocking the subscriber line (VA1), said
program module containing program code which can be
5 executed by a processor (CPUTR) in the terminal (TERA),
characterised in that the program module exhibits
receiving means which are configured in such a way that
the program module can receive from an access device (POP)
of an online data network (INT) current access data which
10 the access device (POP) sends to the terminal (TERA) in
the course of the setting-up of a connection (VA11, VA1,
VPOP) to the online data network (INT) via the subscriber
line (VA1), and in that the program module exhibits
sending means which are configured in such a way that the
15 program module can send the current access data to a
service computer (SCP, GPTM) of the telecommunications
network, which with the aid of the access data can supply
at least one predetermined service for the purpose of
processing an incoming call.

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15. A program module for a terminal (TERA) for handling
incoming telephone calls for a subscriber line (VA1) of a
telecommunications network (PSTN) during an online data-
network session of the terminal (TERA) blocking the
25 subscriber line (VA1), said program module containing
program code which can be executed by a processor (CPUTR)
in the terminal (TERA), **characterised in that** the program
module exhibits receiving means which are configured in
such a way that the program module can receive
30 instructions from a service computer (SCP, GPTM) which the
service computer (SCP, GPTM) sends off to the terminal
(TERA) with a view to supplying at least one predetermined
service for the purpose of processing the incoming call
with the aid of access data which the service computer
35 (SCP, GPTM) has received from the terminal (TERA) after a
connection (VA11, VA1, VPOP) from the terminal (TERA) to

the online data network (INT) has been set up via the
subscriber line (VA1), and in that the program module
exhibits executing means which are configured in such a
way that the program module can execute the instructions.

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16.   A memory means with an access-data-sending program
module according to Claim 14.

17.   A memory means with a program module according to
10   Claim 15.